AMENDMENTS TO THE SPECIFICATION

Please replace paragraph **[0002]** with the following:

[0002] Proton Exchange Membrane (PEM) fuel cell power systems are currently not available in the open market because of two main factors, namely, (1) the lack of robust and efficient hydrogen generators that produce pure hydrogen and (2) the high cost and low efficiency of PEM fuel cell stack or stacks when run on a reformate of H_2 fed to the anode side (PEM fuel cell efficiency=electrical power output/LHV (Lower Heating Value); Hydrogen generator efficiency=LHV of H_2 produced/LHV of feed hydrocarbons). Typically, a reformate is composed of hydrogen and diluents such as ~~CO2, N2,~~ CO_2, N_2, hydrocarbons and contaminants such as CO. Although these two factors appear to be independent, they are not. For the same power output, the size of a PEM fuel cell stack that runs on pure hydrogen (>99.9%) can be 30% smaller than a PEM fuel cell stack that runs on a reformate. This is because the most preferred method of operating a PEM fuel cell is to run its anode side "dead-ended", that is, except for an occasional short time purge, all of the hydrogen that enters the anode side of each cell in the PEM fuel cell stack is utilized (dissociated into H+ ions). When a reformate is fed to the anode side of the fuel cell, the anode side has to be operated in a continuous purge mode (on account of the presence of diluents) and cannot be run "dead-ended". Under such conditions, hydrogen utilization is on the order of only 85%, which means that at least 15% of the hydrogen that is produced by the hydrogen generator is practically "wasted" in the fuel cell. This also raises an additional problem of finding ways to utilize this "wasted" hydrogen, for example by burning this hydrogen to generate useful heat. The efficiency of the PEM fuel cell under such conditions is only about 40%. Assuming an efficiency of about 60% for the hydrogen generator (typically about 50 to 70%), the overall system efficiency works to be only about 24% (=40%x60%). It becomes obvious that at these system efficiencies, a PEM fuel cell power system is several times more expensive than an internal combustion (IC) engine (about >$3000/KW vs <about $50/KW, respectively), with no appreciable gains in efficiency. As a result of this, from a

~~technical standpoint, there is no incentive to install PEM fuel cell power systems on a~~ commercial scale.